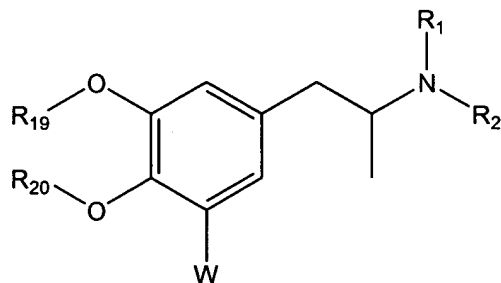


Amendments to the Claims

Please amend the claims as follows:

1. (currently amended) A compound of the formula:



Formula I

wherein: R^{19} is lower alkyl or is taken together with R^{20} to form a ring, which may be a five- or six-member ring, usually a five-member ring;

R^{20} is lower alkyl, or is taken together with R^{19} to form a ring as discussed above,

R^1 is H or lower alkyl,

R^2 is H, lower alkyl, a protecting group or

- (a) $-(CH_2)_aC(O)(CH_2)_bSR^3$, wherein a is 0 to 5, b is 1 to 5 and R^3 is H or lower alkyl or $(CH_2)_cC(O)NR^4R^5$ wherein c is 1 to 5, R^4 is H or lower alkyl and R^5 is H, an immunogenic carrier or a label, or
- (b) $(A)_d(Q)_n$ wherein Q is H or $-(CH_2)_eCH(R^8)(CH_2)_fOC(O)(CH_2)_gR^9$ being H only when d is 1 wherein A is $-C(O)(CH_2)_hC(O)NR^{10}((CH_2)_jO(CH_2)_kO)_m(CH_2)_2NR^{11}$, d is 0 or 1, n is 0 or 1 wherein one of d or n is 1, h is 1 to 5, R^{10} is H or lower alkyl, j is 1 to 5, k is 1 to 5, m is 1 to 3, R^{11} is H or lower alkyl, e is 1 to 5, R^8 is OH or H, f is 1 to 5, g is 0 to 5, and R^9 is H, an immunogenic carrier or a label;

W is H or JR^{14} being H when R^2 is other than H or lower alkyl, wherein

J is O or S,

R^{14} is H, lower alkyl, a protecting group, or $-(CH_2)_rC(O)NR^{15}(CH_2)_s(D)_tR^{16}$, wherein r is 1 to 5, R^{15} is H or lower alkyl, s is 1 to 5, D is S, O or NH, t is 0 or 1 being 0 when R^{16} is maleimidyl or succinimidyl, R^{16} is H, maleimidyl, succinimidyl, or

$-(CH_2)_qC(O)NR^{17}R^{18}$,

q is 1 to 5,

R^{17} is H or lower alkyl,

R^{18} is H, lower alkyl, an immunogenic carrier or label,

and including the acid salts thereof.

2. (original) A compound according to Claim 1 wherein R^1 is H and R^2 is H.

3. (original) A compound according to Claim 1 wherein R^1 is H and R^2 is lower alkyl.

4. (original) A compound according to Claim 3 wherein R^{16} is $-(CH_2)_qC(O)NR^{17}R^{18}$ and R^{18} is a poly(amino acid).

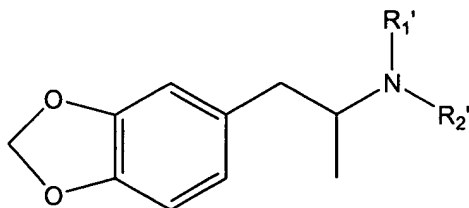
5. (previously presented) A compound according to Claim 1 wherein R^1 is H or lower alkyl, W is H and R^2 is $-(CH_2)_aC(O)(CH_2)_bSR^3$, wherein R^3 is $-(CH_2)_cC(O)NR^4R^5$ wherein R^4 is H or lower alkyl and R^5 is a poly(amino acid).

6. (previously presented) A compound according to Claim 1 wherein R^1 is H or lower alkyl, W is H and R^2 is $-(CH_2)_aC(O)(CH_2)_bSR^3$, wherein R^3 is $-(CH_2)_cC(O)NR^4R^5$ wherein R^4 is H or lower alkyl and R^5 is an immunogenic carrier.

7. (previously presented) A compound according to Claim 1 wherein R^1 is H or lower alkyl, W is H and R^2 is $(A)_d(Q)_n$ wherein d is 0, n is 1, Q is $-(CH_2)_eCH(R^8)(CH_2)_fOC(O)(CH_2)_gR^9$ and R^9 is a poly(amino) acid.

8. (previously presented) A compound according to Claim 1 wherein R^1 is H or lower alkyl, W is H and R^2 is $(A)_d(Q)_n$ wherein d is 1, n is 1, Q is $-(CH_2)_eCH(R^8)(CH_2)_fOC(O)(CH_2)_gR^9$ and A is $-C(O)(CH_2)_hC(O)NR^{10}((CH_2)_jO(CH_2)_kO)_m(CH_2)_2NR^{11}-$, and R^9 is a poly(amino) acid.

9. (currently amended) A compound of the formula:



Formula II

wherein: R^{1'} is H, lower alkyl or a protecting group,

R^{2'} is ~~a protecting group, or~~

- (a) $-(CH_2)_aC(O)(CH_2)_bSR^{3'}$, wherein a is 0 to 5, b is 1 to 5 and R^{3'} is H or lower alkyl or $(CH_2)_cC(O)NR^{4'}R^{5'}$ wherein, c is 1 to 5, R^{4'} is H or lower alkyl and R^{5'} is H, an immunogenic carrier or a label, or
- (b) (A)_d(Q)_n wherein Q is H or $-(CH_2)_eCH(R^{8'})((CH_2)_fOC(O)(CH_2)_gR^{9'})$ being H only when d is 1 wherein A is $-C(O)(CH_2)_hC(O)NR^{10}((CH_2)_jO(CH_2)_kO)_m(CH_2)_2NR^{11}-$, d is 0 or 1, n is 0 or 1 wherein one of d or n is 1, h is 1 to 5, R¹⁰ is H or lower alkyl, j is 1 to 5, k is 1 to 5, m is 1 to 3, R¹¹ is H or lower alkyl, e is 1 to 5, R^{8'} is OH or H, f is 1 to 5, g is 0 to 5, and R^{9'} is H, an immunogenic carrier or a label,

and including the acid salts thereof.

10. (previously presented) A compound according to Claim 9 wherein R^{1'} is H or lower alkyl and R^{2'} is $-(CH_2)_aC(O)(CH_2)_bSR^3$ wherein a is 0, b is 1, R³ is H.

11. (previously presented) A compound according to Claim 9 wherein R^{1'} is H or lower alkyl and R^{2'} is $-(CH_2)_aC(O)(CH_2)_bSR^{3'}$ wherein a is 0, b is 1, R^{3'} is $(CH_2)_cC(O)NR^{4'}R^{5'}$ wherein c is 1, R^{4'} is H and R^{5'} is a poly(amino) acid.

12. (currently amended) A compound according to Claim 11 wherein said poly(amino) acid is an enzyme or an immunogenic carrier ~~immunogen~~.

13. (previously presented) A compound according to Claim 9 wherein R^{1'} is H or lower alkyl and R^{2'} is $-(CH_2)_aC(O)(CH_2)_bSR^{3'}$ wherein a is 0, b is 1, R^{3'} is $(CH_2)_cC(O)NR^{4'}R^{5'}$ wherein c is 1, R^{4'} is H and R^{5'} is an immunogenic carrier.

14. (currently amended) A compound according to Claim 9 wherein $R^{1'}$ is H or lower alkyl and $R^{2'}$ is $-(CH_2)_aC(O)(CH_2)_bSR^{3'}$ wherein a is 0, b is 1, $R^{3'}$ is $(CH_2)_cC(O)NR^{4'}R^{5'}$ wherein c is 1, $R^{4'}$ is H and $R^{5'}$ is a particle label or a particle immunogenic carrier.

15. (previously presented) A compound according to Claim 9 wherein $R^{1'}$ is H or lower alkyl and $R^{2'}$ is $(A)_d(Q)_n$ wherein d is 0, n is 1, Q is $-(CH_2)_eCH(R^{8'})(CH_2)_fOC(O)(CH_2)_gR^{9'}$, e is 1, $R^{8'}$ is OH, f is 1, g is 0 and $R^{9'}$ is a poly(amino) acid.

16. (currently amended) A compound according to Claim 15 wherein said poly(amino) acid is an enzyme or an immunogenic carrier ~~immunogen~~.

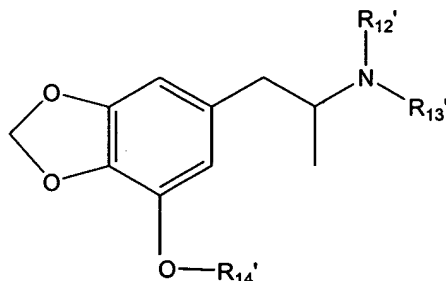
17. (previously presented) A compound according to Claim 9 wherein $R^{1'}$ is H or lower alkyl and $R^{2'}$ is $(A)_d(Q)_n$ wherein d is 0, n is 1, Q is H, A is $-C(O)(CH_2)_hC(O)NR^{10'}((CH_2)_jO(CH_2)_kO)_m(CH_2)_2NR^{11'}$, $R^{10'}$ is H, h is 2, m is 1, j is 2, k is 2, $R^{10'}$ is H.

18. (currently amended) A compound according to Claim 9 wherein $R^{1'}$ is H or lower alkyl and $R^{2'}$ is $(A)_d(Q)_n$ wherein d is 1, n is 1, Q is $-(CH_2)_eCH(R^{8'})(CH_2)_fOC(O)(CH_2)_gR^{9'}$, e is 1, $R^{8'}$ is OH, f is 1, g is 0, A is $-C(O)(CH_2)_hC(O)NR^{10'}((CH_2)_jO(CH_2)_kO)_m(CH_2)_2NR^{11'}$, $R^{10'}$ is H, h is 2, m is 1, j is 2, k is 2, $R^{10'}$ is H and $R^{9'}$ is a poly(amino) acid or a particle label or a particle immunogenic carrier.

19. (currently amended) A compound according to Claim 18 wherein $R^{9'}$ is a poly(amino) acid, which is an enzyme or an immunogenic carrier ~~immunogen~~.

20. (currently amended) A compound according to Claim 18 wherein $R^{9'}$ is a particle label or a particle immunogenic carrier.

21. (currently amended) A compound of the formula:



Formula III

wherein: $R^{12'}$ is H or lower alkyl,
 $R^{13'}$ is H or lower alkyl,
 $R^{14'}$ is a protecting group, or $-(CH_2)_rC(O)NR^{15'}(CH_2)_s(D)_tR^{16'}$, wherein r is 1 to 5, $R^{15'}$ is H or lower alkyl, s is 1 to 5, D is S, O or NH , t is 0 or 1 being 0 when $R^{16'}$ is maleimidyl or succinimidyl, $R^{16'}$ is H, a protecting group, maleimidyl or succinimidyl, or $-(CH_2)_qC(O)NR^{17'}R^{18'}$, wherein q is 1 to 5,
 $R^{17'}$ is H, lower alkyl or a protecting group,
 $R^{18'}$ is H, lower alkyl, a protecting group, an immunogenic carrier or label,
and including salts thereof.

22. (previously presented) A compound according to Claim 21 wherein $R^{12'}$ is H and $R^{13'}$ is H or lower alkyl, $R^{14'}$ is $-(CH_2)_rC(O)NR^{15'}(CH_2)_s(D)_tR^{16'}$, wherein r is 1, $R^{15'}$ is H, s is 2, D is S, t is 1 and $R^{16'}$ is H.

23. (previously presented) A compound according to Claim 21 wherein $R^{12'}$ is H and $R^{13'}$ is H or lower alkyl, $R^{14'}$ is $-(CH_2)_rC(O)NR^{15'}(CH_2)_s(D)_tR^{16'}$, wherein r is 1, $R^{15'}$ is H, s is 2, t is 0 and $R^{16'}$ is succinimidyl or maleimidyl.

24. (currently amended) A compound according to Claim 21 wherein $R^{12'}$ is H and $R^{13'}$ is H or lower alkyl, $R^{14'}$ is $-(CH_2)_rC(O)NR^{15'}(CH_2)_s(D)_tR^{16'}$, wherein r is 1, $R^{15'}$ is H, s is 2, D is S, t is 1 and $R^{16'}$ is $-(CH_2)_qC(O)NR^{17'}R^{18'}$, q is 1, $R^{17'}$ is H and $R^{18'}$ is a poly(amino) acid or a particle label or a particle immunogenic carrier.

25. (currently amended) A compound according to Claim 24 wherein R¹⁸ is a particle label or a particle immunogenic carrier.

26. (currently amended) An antibody raised against a compound according to Claim 16 wherein said poly(amino) acid is an immunogenic carrier ~~immunogen~~.

27. (currently amended) An antibody raised against a compound according to Claim 19 wherein said poly(amino) acid is an immunogenic carrier ~~immunogen~~.

28. (currently amended) An antibody raised against a compound according to Claim 24 wherein R¹⁷ is a poly(amino) acid, which is an immunogenic carrier ~~immunogen~~.

29. (previously presented) A reagent system comprising a compound according to Claim 16 wherein said poly(amino) acid is an enzyme, an antibody for methylenedioxyamphetamine and/or an antibody for methylenedioxymethamphetamine and/or an antibody for methylenedioxyethamphetamine.

30. (previously presented) A reagent system comprising a compound according to Claim 19 wherein said poly(amino) acid is an enzyme, an antibody for methylenedioxyamphetamine and/or an antibody for methylenedioxymethamphetamine and/or an antibody for methylenedioxyethamphetamine.

31. (previously presented) A reagent system comprising a compound according to Claim 24 wherein R¹⁷ is a poly(amino) acid, which is an enzyme, an antibody for methylenedioxyamphetamine and/or an antibody for methylenedioxymethamphetamine and/or an antibody for methylenedioxyethamphetamine.

32. (previously presented) A method for determining methylenedioxyamphetamine and/or methylenedioxymethamphetamine and/or methylenedioxyethamphetamine in a sample suspected of containing methylenedioxyamphetamine and/or methylenedioxymethamphetamine and/or methylenedioxyethamphetamine, said method comprising:

- (a) providing in combination in a medium:
 - (i) said sample and
 - (ii) a reagent system according to Claim 29; and

(b) examining said medium for the presence of a complex comprising said methylenedioxyamphetamine and said antibody for methylenedioxyamphetamine and/or a complex of said methylenedioxymethamphetamine and said antibody for methylenedioxymethamphetamine, the presence thereof indicating the presence of said methylenedioxyamphetamine and/or methylenedioxymethamphetamine and/or methylenedioxyethamphetamine in said sample.

33. (previously presented) A method according to Claim 32 wherein said examining comprises measuring signal from said enzyme, the amount thereof being related to the presence of said methylenedioxyamphetamine and/or methylenedioxymethamphetamine and/or methylenedioxyethamphetamine in said sample.

34. (previously presented) A method according to Claim 33 wherein said method is a homogeneous method and said medium is examined for the amount of said signal.

35. (previously presented) A method according to Claim 33 wherein said method is a heterogeneous method and said complex, if present, is separated from said medium and said medium or said complex is examined for the amount of said signal.

36. (previously presented) A method for determining methylenedioxyamphetamine and/or methylenedioxymethamphetamine and/or methylenedioxyethamphetamine in a sample suspected of containing methylenedioxyamphetamine and/or methylenedioxy-methamphetamine and/or methylenedioxyethamphetamine, said method comprising:

- (a) providing in combination in a medium:
 - (i) said sample and
 - (ii) a reagent system according to Claim 30; and

(b) examining said medium for the presence of a complex comprising said methylenedioxyamphetamine and said antibody for methylenedioxyamphetamine and/or a complex of said methylenedioxymethamphetamine and said antibody for methylenedioxymethamphetamine

and/or a complex of said methylenedioxyethamphetamine and said antibody for methylenedioxyethamphetamine, the presence thereof indicating the presence of said methylenedioxyamphetamine and/or methylenedioxymethamphetamine and/or methylenedioxyethamphetamine in said sample.

37. (previously presented) A method according to Claim 36 wherein said examining comprises measuring signal from said enzyme, the amount thereof being related to the presence of said methylenedioxyamphetamine and/or methylenedioxymethamphetamine and/or methylenedioxyethamphetamine in said sample.

38. (previously presented) A method according to Claim 37 wherein said method is a homogeneous method and said medium is examined for the amount of said signal.

39. (previously presented) A method according to Claim 37 wherein said method is a heterogeneous method and said complex, if present, is separated from said medium and said medium or said complex is examined for the amount of said signal.

40. (previously presented) A method for determining methylenedioxyamphetamine and/or methylenedioxymethamphetamine in a sample suspected of containing methylenedioxyamphetamine and/or methylenedioxymethamphetamine and/or methylenedioxyethamphetamine, said method comprising:

- (a) providing in combination in a medium:
 - (i) said sample and
 - (ii) a reagent system according to Claim 31; and

(b) examining said medium for the presence of a complex comprising said methylenedioxyamphetamine and said antibody for methylenedioxyamphetamine and/or a complex of said methylenedioxymethamphetamine and said antibody for methylenedioxymethamphetamine and/or a complex of said methylenedioxymethamphetamine and said antibody for methylenedioxymethamphetamine, the presence thereof indicating the presence of said methylenedioxyamphetamine and/or methylenedioxymethamphetamine in said sample.

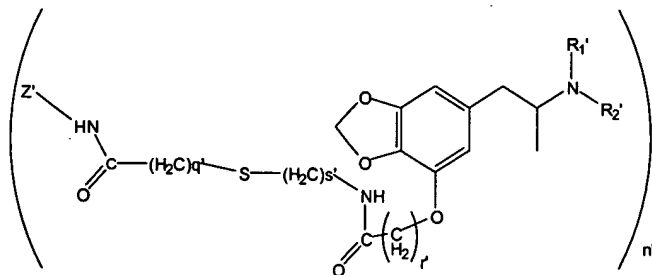
41. (previously presented) A method according to Claim 40 wherein said examining comprises measuring signal from said enzyme, the amount thereof being related to the presence of said methylenedioxyamphetamine and/or methylenedioxymethamphetamine and/or methylenedioxyethamphetamine in said sample.

42. (previously presented) A method according to Claim 41 wherein said method is a homogeneous method and said medium is examined for the amount of said signal.

43. (previously presented) A method according to Claim 41 wherein said method is a heterogeneous method and said complex, if present, is separated from said medium and said medium or said complex is examined for the amount of said signal.

44. (previously presented) A method for determining amphetamine and/or methamphetamine and/or methylenedioxyethamphetamine in a sample suspected of containing methylenedioxyamphetamine and/or methylenedioxymethamphetamine and/or methylenedioxyethamphetamine, said method comprising:

- (a) providing in combination in a medium:
 - (i) said sample,
 - (ii) an antibody for methylenedioxyamphetamine, and/or
 - (iii) an antibody for methylenedioxymethamphetamine, and/or
 - (iv) an antibody for methylenedioxyethamphetamine, and
 - (v) a compound of the formula:



wherein:

$R^{1'}$ is H,

$R^{2'}$ is H, methyl or ethyl,

r' is 1 to 5,

s' is 1 to 5,

q' is 1 to 5,

Z' is an enzyme,

n' is an integer between 1 and the molecular weight of said enzyme divided by about 500;

and

(b) examining said medium for the presence of a complex comprising said methylenedioxyamphetamine and said antibody for methylenedioxyamphetamine and/or a complex of said methylenedioxymethamphetamine and said antibody for methylenedioxymethamphetamine and/or a complex of said methylenedioxyethamphetamine and said antibody for methylenedioxyethamphetamine, the presence thereof indicating the presence of said methylenedioxyamphetamine and/or methylenedioxymethamphetamine and/or methylenedioxyethamphetamine in said sample.

45. (previously presented) A method according to Claim 44 wherein said examining comprises measuring signal from said enzyme, the amount thereof being related to the presence of said methylenedioxyamphetamine and/or methylenedioxymethamphetamine and/or methylenedioxyethamphetamine in said sample.

46. (previously presented) A method according to Claim 45 wherein said method is a homogeneous method and said medium is examined for the amount of said signal.

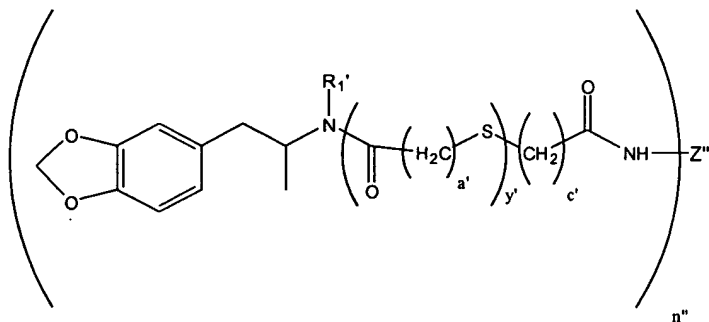
47. (previously presented) A method according to Claim 45 wherein said method is a heterogeneous method and said complex, if present, is separated from said medium and said medium or said complex is examined for the amount of said signal.

48. (previously presented) A method according to Claim 44 wherein said enzyme is glucose-6-phosphate dehydrogenase.

49. (previously presented) A method for determining methylenedioxyamphetamine and/or methylenedioxymethamphetamine and/or methylenedioxyethamphetamine in a sample suspected of

containing methylenedioxyamphetamine and/or methylenedioxy-methamphetamine and/or methylenedioxyethamphetamine, said method comprising:

- (a) providing in combination in a medium:
 - (i) said sample,
 - (ii) an antibody for methylenedioxyamphetamine, and/or
 - (iii) an antibody for methylenedioxymethamphetamine, and/or
 - (iv) an antibody for methylenedioxyethamphetamine, and
 - (v) a compound of the formula:



wherein:

R^{1'} is H, or methyl, or ethyl,

a' is 1 to 5,

y' is 1,

Z' is an enzyme,

c' is 1 to 5,

n' is an integer between 1 and the molecular weight of said enzyme divided by about 500;

and

(b) examining said medium for the presence of a complex comprising said methylenedioxyamphetamine and said antibody for methylenedioxyamphetamine and/or a complex of said methylenedioxymethamphetamine and said antibody for methylenedioxymethamphetamine and/or a complex of said methylenedioxyethamphetamine and said antibody for methylenedioxyethamphetamine, the presence thereof indicating the presence of said methylenedioxyamphetamine and/or methylenedioxymethamphetamine and/or methylenedioxymethamphetamine in said sample.

50. (previously presented) A method according to Claim 49 wherein said examining comprises measuring signal from said enzyme, the amount thereof being related to the presence of said methylenedioxyamphetamine and/or methylenedioxymethamphetamine and/or methylenedioxyethamphetamine in said sample.

51. (previously presented) A method according to Claim 50 wherein said method is a homogeneous method and said medium is examined for the amount of said signal.

52. (previously presented) A method according to Claim 50 wherein said method is a heterogeneous method and said complex, if present, is separated from said medium and said medium or said complex is examined for the amount of said signal.

53. (previously presented) A method according to Claim 49 wherein said enzyme is glucose-6-phosphate dehydrogenase.

54. (previously presented) A method for determining methylenedioxyamphetamine and/or methylenedioxymethamphetamine and/or methylenedioxyethamphetamine in a sample suspected of containing methylenedioxyamphetamine and/or methylenedioxymethamphetamine and/or methylenedioxyethamphetamine, said method comprising:

(a) providing in combination in a medium:

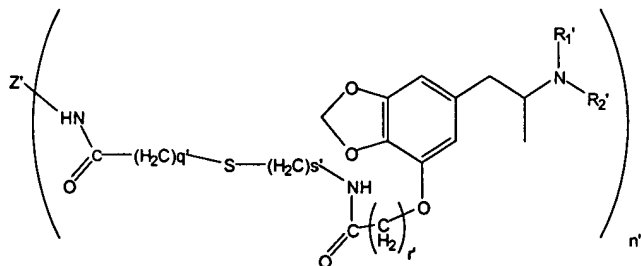
(i) said sample,

(ii) conjugate of an enzyme and a methylenedioxyamphetamine

analog and/or a conjugate of an enzyme and a methylenedioxymethamphetamine analog and/or a conjugate of an enzyme and a methylenedioxyethamphetamine analog,

(i) an antibody for methylenedioxyamphetamine, said antibody

being raised against a compound of the formula:



wherein:

$R^{1'}$ is H,

$R^{2'}$ is H,

r' is 1 to 5,

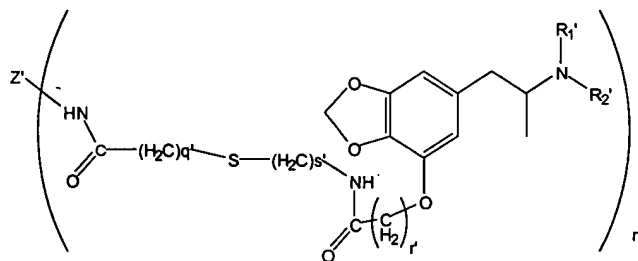
s' is 1 to 5,

q' is 1 to 5,

Z' is an immunogenic protein or a non-poly(amino acid) immunogenic carrier,

n'' is an integer between 1 and the molecular weight of said immunogenic protein or said immunogenic carrier divided by about 500; and/or

(iv) an antibody for methylenedioxymethamphetamine, said antibody being raised against a compound of the formula:



wherein:

$R^{1'}$ is H,

$R^{2'}$ is methyl,

r' is 1 to 5,

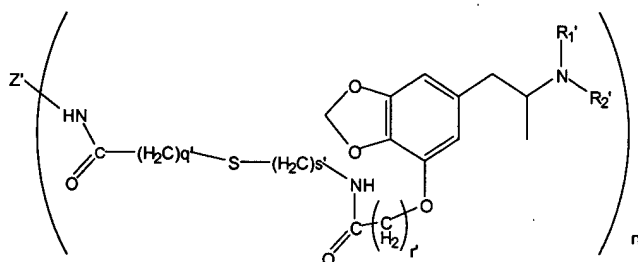
s' is 1 to 5,

q' is 1 to 5,

Z' is an immunogenic protein or a non-poly(amino acid) immunogenic carrier,

n'' is an integer between 1 and the molecular weight of said immunogenic protein or said immunogenic carrier divided by about 500; and/or

(v) an antibody for methylenedioxyethamphetamine, said antibody being raised against a compound of the formula:



wherein:

$R^{1'}$ is H,

$R^{2'}$ is ethyl,

r' is 1 to 5,

s' is 1 to 5,

q' is 1 to 5,

Z' is an immunogenic protein or a non-poly(amino acid) immunogenic carrier,

n'' is an integer between 1 and the molecular weight of said immunogenic protein or said immunogenic carrier divided by about 500; and

(b) examining said medium for the presence of a complex comprising said methylenedioxyamphetamine and said antibody for methylenedioxyamphetamine and/or a complex of said methylenedioxymethamphetamine and said antibody for methylenedioxymethamphetamine and/or a complex of said methylenedioxyethamphetamine and said antibody for methylenedioxyethamphetamine, the presence thereof indicating the presence of said methylenedioxyamphetamine and/or methylenedioxymethamphetamine and/or methylenedioxyethamphetamine in said sample.

55. (previously presented) A method according to Claim 54 wherein said examining comprises measuring signal from said enzyme, the amount thereof being related to the presence of said methylenedioxyamphetamine and/or methylenedioxymethamphetamine and/or methylenedioxyethamphetamine in said sample.

56. (previously presented) A method according to Claim 55 wherein said method is a homogeneous method and said medium is examined for the amount of said signal.

57. (previously presented) A method according to Claim 55 wherein said method is a heterogeneous method and said complex, if present, is separated from said medium and said medium or said complex is examined for the amount of said signal.

58. (original) A method according to Claim 55 wherein said enzyme is glucose-6-phosphate dehydrogenase.

59. (original) A method for determining methylenedioxyamphetamine and/or methylenedioxymethamphetamine in a sample suspected of containing methylenedioxyamphetamine and/or methylenedioxymethamphetamine, said method comprising:

(a) providing in combination in a medium:

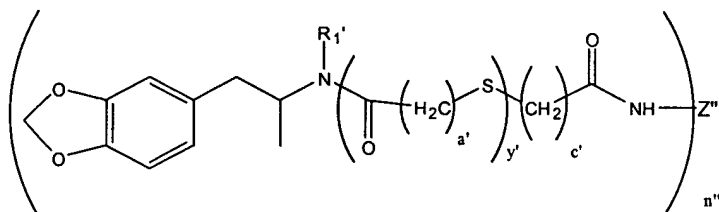
(i) said sample,

(ii) a conjugate of an enzyme and an methylenedioxyamphetamine

analog and/or a conjugate of an enzyme and a methylenedioxymethamphetamine analog and/or a conjugate of an enzyme and a methylenedioxyethamphetamine analog,

(i) an antibody for methylenedioxyamphetamine, said antibody

being raised against a compound of the formula:



wherein:

R^{1'} is H,

a' is 1 to 5,

y' is 1,

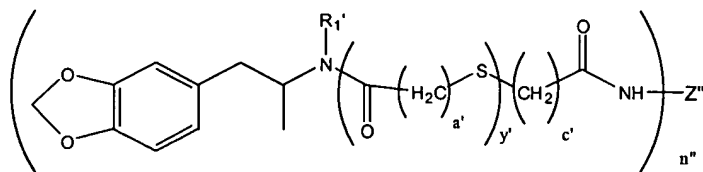
Z'' is an immunogenic protein or a non-poly(amino acid) immunogenic carrier,

c' is 1 to 5,

n'' is an integer between 1 and the molecular weight of said immunogenic protein or said immunogenic carrier divided by about 500; and/or

(iv) an antibody for methylenedioxymethamphetamine, said antibody being raised

against a compound of the formula:



wherein:

$R^{1'}$ is methyl,

a' is 1 to 5,

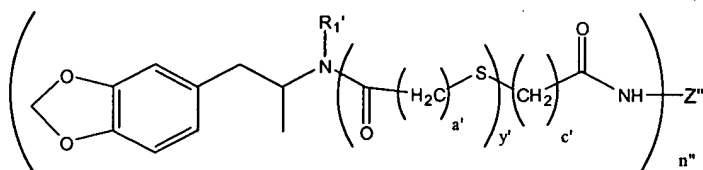
y' is 1,

Z'' is an immunogenic protein or a non-poly(amino acid) immunogenic carrier,

c' is 1 to 5,

n'' is an integer between 1 and the molecular weight of said immunogenic protein or said immunogenic carrier divided by about 500; and/or

(v) an antibody for methylenedioxyethamphetamine, said antibody being raised against a compound of the formula:



wherein:

$R^{1'}$ is ethyl,

a' is 1 to 5,

y' is 1,

Z'' is an immunogenic protein or a non-poly(amino acid) immunogenic carrier,

c' is 1 to 5,

n'' is an integer between 1 and the molecular weight of said immunogenic protein or said immunogenic carrier divided by about 500; and

(b) examining said medium for the presence of a complex comprising said methylenedioxyamphetamine and said antibody for methylenedioxyamphetamine and/or a complex of said methylenedioxymethamphetamine and said antibody for methylenedioxymethamphetamine and/or a complex of said methylenedioxyethamphetamine and said antibody for methylenedioxyethamphetamine, the presence thereof indicating the presence of said amphetamine and/or methamphetamine and/or methylenedioxyethamphetamine in said sample.

60. (original) A method according to Claim 59 wherein said examining comprises measuring signal from said enzyme, the amount thereof being related to the presence of said methylenedioxyamphetamine and/or methylenedioxymethamphetamine and/or methylenedioxyethamphetamine in said sample.

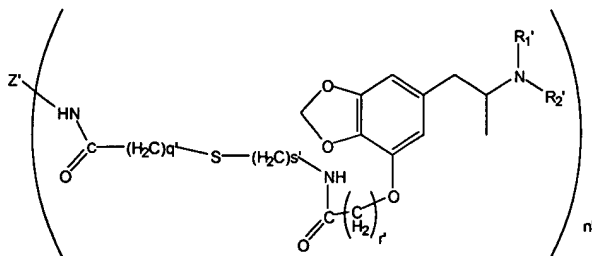
61. (original) A method according to Claim 60 wherein said method is a homogeneous method and said medium is examined for the amount of said signal.

62. (original) A method according to Claim 60 wherein said method is a heterogeneous method and said complex, if present, is separated from said medium and said medium or said complex is examined for the amount of said signal.

63. (original) A method according to Claim 59 wherein said enzyme is glucose-6-phosphate dehydrogenase.

64. (original) A kit comprising in packaged combination:

- (i) an antibody for methylenedioxyamphetamine, and/or
- (ii) an antibody for methylenedioxymethamphetamine, and/or
- (iii) an antibody for methylenedioxyethamphetamine, and
- (iv) a compound of the formula:



wherein:

R^{1'} is H,

R^{2'} is H, methyl, or ethyl,

r' is 1 to 5,

s' is 1 to 5,

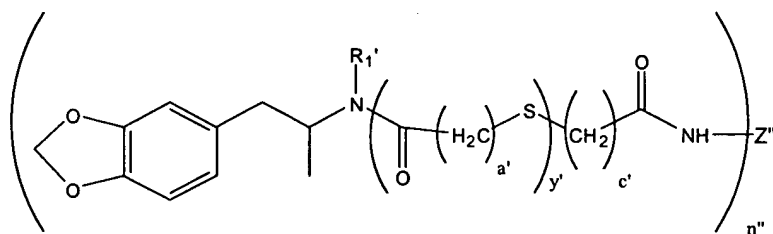
q' is 1 to 5,

Z' is an enzyme such as, for example, glucose-6-phosphate dehydrogenase,
n' is an integer between 1 and the molecular weight of said enzyme divided by about 500.

65. (original) A kit according to Claim 64 wherein said enzyme is glucose-6-phosphate dehydrogenase.

66. (currently amended) A kit comprising in packaged combination:

- (i) an antibody for methylenedioxyamphetamine,
- (ii) an antibody for methylenedioxymethamphetamine, and/or
- (iii) an antibody for methylenedioxyethamphetamine, and
- (iv) a compound of the formula:



wherein:

R^{1'} is H, methyl or ethyl,
a' is 1 to 5, usually 1,
y' is 0 or 1,
Z' is an enzyme such as, for example, glucose-6-phosphate dehydrogenase,
c' is 1 to 5,
n' is an integer between 1 and the molecular weight of said enzyme divided by about 500.

67. (original) A kit according to Claim 66 wherein said enzyme is glucose-6-phosphate dehydrogenase.

68. (original) A kit comprising in packaged combination:

(i) a conjugate of an enzyme and a methylenedioxyamphetamine analog
and/or a conjugate of an enzyme and a methylenedioxymethamphetamine analog, and/or a
conjugate of an enzyme and a methylenedioxyethamphetamine analog, and

$$\left(\text{Z}' - \text{HN} - \text{C}(=\text{O}) - (\text{H}_2\text{C})_{q'} - \text{S} - (\text{H}_2\text{C})_{s'} - \text{NH} - \text{C}(=\text{O}) - \left(\text{C}(\text{H}_2)_{r'} \right)_n - \text{O} - \text{C}_6\text{H}_3\text{C}_2\text{H}_4\text{N}(\text{R}_1')(\text{R}_2') \right)_m$$
$$\left(\text{HN} \begin{array}{c} \diagup \text{Z}' \\ \diagdown \end{array} \text{C}(=\text{O}) \text{---} (\text{H}_2\text{C})^q \text{---} \text{S} \text{---} (\text{H}_2\text{C})^s \text{---} \text{NH} \begin{array}{c} \diagup \text{O} \\ \diagdown \text{O} \end{array} \begin{array}{c} \diagup \text{O} \\ \diagdown \text{O} \end{array} \text{C}_6\text{H}_3 \text{---} \text{CH}_2\text{CH}_2\text{CH}(\text{CH}_3)_2 \text{N}(\text{R}_1')(\text{R}_2') \right)_n$$

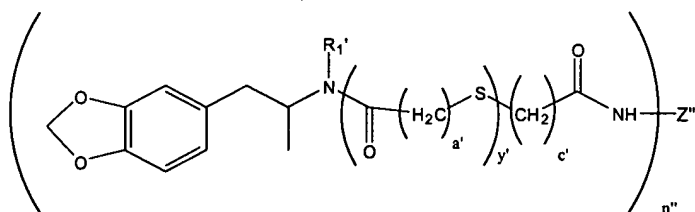
q' is 1 to 5,

n' is an integer between 1 and the molecular weight of said immunogenic protein or said immunogenic carrier divided by about 500, and/or

$$\left(\text{HN} - \overset{\text{O}}{\parallel}{\text{C}} - (\text{H}_2\text{C})_{q'} - \text{S} - (\text{H}_2\text{C})_{s'} - \text{NH} - \begin{array}{c} \diagup \text{O} \diagdown \\ | \quad | \\ \text{O} \quad \text{O} \end{array} - \text{C}_6\text{H}_3 - \text{CH}_2\text{CH}_2\text{CH}(\text{Me})\text{N}(\text{R}'_1)\text{R}'_2 - \begin{array}{c} \diagup \text{O} \diagdown \\ | \quad | \\ \text{O} \quad \text{O} \end{array} - \text{C}(=\text{O}) - \text{C}(\text{H}_2)_{r'} - \text{O} \right)_n$$

n" is an integer between 1 and the molecular weight of said immunogenic protein or said immunogenic carrier divided by about 500.

being raised against a compound of the formula:



wherein:

$R^{1'}$ is H,

a' is 1 to 5,

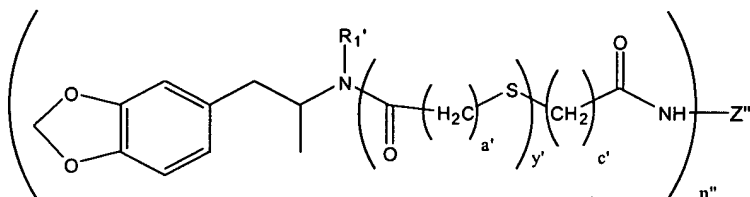
y' is ~~0 or 1~~, usually 1,

Z'' is an immunogenic protein or a non-poly(amino acid) immunogenic carrier,

c' is 1 to 5,

n'' is an integer between 1 and the molecular weight of said immunogenic protein or said immunogenic carrier divided by about 500; and/or

(iii) an antibody for methylenedioxymethamphetamine, said antibody being raised against a compound of the formula:



wherein:

$R^{1'}$ is methyl,

a' is 1 to 5,

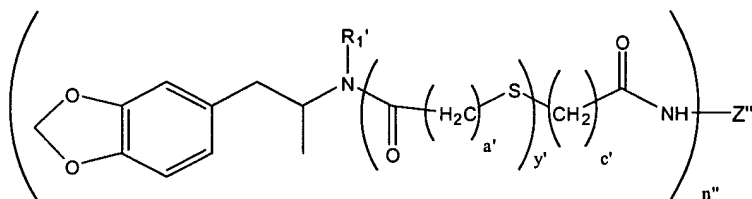
y' is ~~0 or 1~~, usually 1,

Z'' is an immunogenic protein or a non-poly(amino acid) immunogenic carrier,

c' is 1 to 5,

n'' is an integer between 1 and the molecular weight of said immunogenic protein or said immunogenic carrier divided by about 500, and/or

(iv) an antibody for methylenedioxyethamphetamine, said antibody being raised against a compound of the formula:



wherein:

$R^{1'}$ is ethyl,

a' is 1 to 5,

y' is ~~0 or 1~~, usually 1,

Z'' is an immunogenic protein or a non-poly(amino acid) immunogenic carrier,

c' is 1 to 5,

n'' is an integer between 1 and the molecular weight of said immunogenic protein or said immunogenic carrier divided by about 500.